REMARKS

Claim 4 was objected to for the use of the term "and" in line 4.

Claim 4 has been amended to change the term "and" to --message--. Additionally, claim 1 has been amended to include the term --modem-- following the term "ADSL" in line 8. Accordingly, the objection should be withdrawn.

Claims 6, 9 and 12 were rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May (USPA 2001/0030977) in view of Cheline et al. (USPA 2003/0055990). The Applicant respectfully traverses this rejection for the following reason(s).

Please note that a Declaration under 37 CFR §1.131 swearing back of the patent to Cheline et al. on a Disclosure Document filed on July 26, 2001, prior to Cheline et al's effective filing date of August 23, 2001, has been filed with/accompanying this Amendment. The Disclosure Document satisfies the description and enablement requirements of 35 U.S.C. § 112, first paragraph in it's description of the invention described and claimed in said application

As shown by the following tables, the invention claimed herein is fully disclosed in the Disclosure Document.

Method of Invention claimed:

Claim 1	Disclosed in Certified Translation
forming a single network between a client personal computer (PC) and a network access server (NAS) by allowing the ADSL modem to make a PPP connection to the NAS when the client PC is booted, by allowing the NAS to transmit Internet protocol (IP) configuration information, including a global IP address, to a DHCP server of the ADSL modem through a PPP Internet protocol control protocol (IPCP), and by allowing the ADSL modem to transfer the IP configuration information received from the NAS to the client PC	Fig. 4; Page 5, lines 3-18; Claim A, step 1
forming a bridge by the ADSL modem between the client PC and the NAS and transferring IP packets between the client PC and the NAS	Page 5, lines 18-19; Claim A, step 2
allowing the NAS to withdraw the global IP address assigned to the client PC when one of the client PC and the ADSL modem is turned off.	Page 10, lines 18-20; Claim A, step 3

Apparatus of Invention claimed:

Claim 6	Disclosed in Disclosure Document
a client personal computer (PC)	Fig. 4 on page 6
an network access server (NAS)	Fig. 4 on page 6
an asymmetric digital subscriber line (ADSL) modem	Fig. 4 on page 6
an ATM layer, a PPP layer, an Internet protocol (IP) layer, a user datagram protocol (UDP) layer and a DHCP server,	Fig. 3 on page 5
said ADSL modem completing a single network connection between said client PC and said NAS by forming a PPP connection to said NAS when said client PC is booted, by receiving at said DHCP server, through an Internet Protocol control protocol (IPCP) of said PPP layer, IP configuration information, including a global IP address transmitted from said NAS, and by transferring the IP configuration information received from the NAS to the client PC to enable said ADSL modem to form a bridge between said client PC and said NAS to allow IP packets to be transferred between said client PC and said NAS.	(see Method table above)

Conception of the invention, evidenced by the Invention Disclosure Document filed July 26, 2001, and its drawings, followed by the constructive reduction to practice by the filing of the Provisional Patent Application Serial No. 60/316,282 on September 4, 2001, shows reasonable diligence. *Automatic Weighing Mach. Co. v. Pneumatic Scale Corp.,* 166 F.2d 288, 1909 C.D. 498,

139 O.G. 991 (1st Cir. 1909).

Furthermore, claim 6 calls for, in part, *an asymmetric digital subscriber line (ADSL) modem including . . . a DHCP server.*

In May, the DHCP server 430 is not included in the xDSL modem 110, but is instead separated from the modem 110 by a hybrid Ethernet switching bridge. The Examiner makes no mention of the DHCP server discussed by May. May discloses that the DHCP server 430 is accessed when an IP address is requested by a LAN attached device. An IP address request may be transmitted in an ATM cell with a previously assigned Virtual Path Identifier/Virtual Channel Identifier (VPI/VCI), which can either be dedicated for the acquisition of addresses using DHCP or can be shared for IP address acquisition as well as for data transport (paragraph [0046]). May further discloses that the high-speed modem 110, through its DHCP layer 524, can function as a DHCP client. The DHCP client exchanges DHCP Address_Acquisition_Pack- ets 640 with the DHCP server 430 to obtain an IP address for computer 100. DHCP Address_Acquisition_Packets 640 includes all packets sent between the DHCP client and the DHCP server 430 for obtaining an IP address (paragraph [0054]).

Accordingly, May teaches that the PC receives, via the modem, IP configuration information (an IP address) from the DHCP server.

The Examiner refers us to Cheline's DHCP server 230 (Fig. 2) included in DSL modem 106 that utilizes an IP Network Address Translator (NAT: see Network Working Group Request for Comments: 1631 (RFC1631)). Cheline discloses that the Network Address Translation (NAT) 228

is used to translate Internet Protocol addresses (IP addresses) used within one network, preferably the LAN 104 (FIG. 1), to different IP addresses known within another network, preferably the Internet 116 (FIG. 1). Therefore, NAT maps the LAN IP addresses to one or more global IP addresses and unmaps the global IP addresses of incoming packets back into LAN IP addresses (paragraph [0049].

Cheline also discloses that the the modem's DHCP server 230 (FIG. 2) is configured to offer the subnet to the client computers 102 (FIG. 1). Alternatively, if the **server operator assigns a global static IP address** to each modem, the modem uses a one-to-one NAT to make each client computer appear to be sourced by the static IP address (emphasis added; paragraph [0050]).

Further, Cheline discloses in paragraphs [0061] and [0062] that the DHCP server 230 lets network administrators manage centrally and automate the assignment of Internet Protocol (IP) addresses to the client computers 102 (FIG. 1) in the LAN 104 (FIG. 1). Using the Internet's set of protocols (TCP/IP), each client 102 (FIG. 1) that can connect to the Internet 116 (FIG. 1) is assigned a unique IP address. Without DHCP, the IP address must be entered manually at each computer and, if computers move to another location in the LAN, a new IP address must be entered. The DHCP server 230 lets a network system administrator supervise and distribute IP addresses from a central point and automatically send a new IP address when a computer is plugged into a different place in the network. And that the DNS (Domain Name System) relay procedures 232 allows the user's client computer 102 (FIG. 1) to resolve IP addresses within the private corporate-side LAN 156 (FIG. 1), and resolve Internet domain names into IP addresses.

Accordingly, neither May nor Cheline disclose, nor teach, separately or together, *receiving*

at said DHCP server, through an Internet Protocol control protocol (IPCP) of said PPP layer, IP

*configuration information, including a global IP address **transmitted from said NAS**.*

With regard to the claimed NAS, the Examiner refers us to May's paragraph [0016] which

states:

> "In a second embodiment of the present invention, a method and apparatus for providing a universal access mechanism to broadband services is presented. A broadband device functions as a PPPoE proxy by interfacing a computer using a LAN-based protocol such as Ethernet and a **broadband access server (BAS)** using the PPPoE protocol. The broadband device is accessed by a computer user using a common mechanism such as an HTML-based browser to request a connection to a public or private network. The broadband device then establishes a PPPoE connection to an access server. The broadband device receives IP packets encapsulated in Ethernet frames from the user's computer and then encapsulates the IP packets into PPP frames that are in turn encapsulated in PPPoE frames. The broadband device performs a series of protocol encapsulation including PPPoE frames into Ethernet frames that are mapped in RFC1483 frames. The RFC1483 frames are in a last step mapped in ATM cells and sent over an xDSL link to the **broadband access server**." (emphasis added)

Note that a **Network Access Server (NAS)** is well known in the art for being able to attach

a "modem" to a telephone circuit and provide data access to the Internet. In the future, the same

gateways will combine VoIP services and Network Access Services.

May's BAS (broadband access server) appears to meet the description of an NAS. Also, note

that May does not specifically identify which component forms the mentioned BAS, but does show

the use of a gateway/router 440 for accessing the Internet.

May, however, fails to teach that the BAS provides *IP configuration information, including*

a global IP address to the DHCP server. Additionally, Cheline does not even disclose a network

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access server, and thus fails to teach providing *IP configuration information, including a global IP address* from an NAS.

Accordingly, the rejection of claims 6, 9 and 12 is deemed to be in error and should be withdrawn.

Claim 6 further requires that *said ADSL modem completing a single network connection between said client PC and said NAS by forming a PPP connection to said NAS when said client PC is booted.*

Here, the Examiner does not apply Cheline in this regard, and refers us to May by stipulating that "It is inherent that the client PC must be started." While it is well known that PC must be started and that when started a boot process is performed, it is not inherent, and May does not teach, that *when said client PC is booted* the xDSL modem completes a single network connection between the client PC and the BAS by forming a PPP connection to the BAS. Instead, May teaches in paragraph [0051] that the client PC, i.e., computer 100, opens a PPP session with high-speed modem 110 by dialing in to high-speed modem 110. There is no suggestion that the dialing be performed *when said client PC is booted.*

Regarding claim 12, claim 12 requires that the NAS withdraw the global IP address assigned to the client PC when a lease time expires.

May teaches an advantage of the disclosed invention in that it the computer has the ability to establish a PPP connection in a WAN configuration to a high-speed modem, which then

establishes a connection through the access network to a DHCP server and obtains an IP address from the server. The computer can utilize this address for the duration of a session by using DHCP lease renewal packets (paragraph [0014]). The DHCP server in May is not a Network Access Server (NAS) because it does not have the function of being able to attach a "modem" to a telephone circuit and provide data access to the Internet.

Accordingly, there is no teaching that the BAS (NAS) in May suggesting that the NAS withdraw the global IP address assigned to the client PC when a lease time expires.

Accordingly, the rejection of claims 6, 9 and 12 is deemed to be in error and should be withdrawn.

Claim 8 was rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May and Cheline et al. in view of Pagani et al. (USPA 2002/0095484). The Applicant respectfully traverses this rejection for the following reason(s).

First, Pagani fails to teach the features noted above as lacking in the combined teachings of May and Cheline, with respect to claim 6. Accordingly, the rejection of claim 8 is deemed to be in error for the same reasons as the rejection of claim 6.

Second, claim 8 calls for the IP configuration information to include *a subnet mask consisting of said global IP address and a gateway address*. The Examiner correctly notes that May and Cheline are silent in this regard. The Examiner errs, however, in applying Pagani.

Looking to the rejection, we find that the Examiner suggests that Pagani teaches the

foregoing feature of claim 8, but fails to provide a *prima facie* showing where such a feature is taught by Pagani.

Note, *Ex parte Levy*, 17 USPQ2d 1461, 1462 (1990) states:

> "it is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference."

Note that although Pagani mentions a WAN or LAN Subnet Mask, there is no teaching that the Subnet Mask consist of *said global IP address and a gateway address*.

Accordingly, the rejection of claim 8 is deemed to be in error and should be withdrawn.

Claim 10 was rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May and Cheline et al. in view of Merrill et al. (USPA 2003/0198215). The Applicant respectfully traverses this rejection for the following reason(s).

First, Merrill fails to teach the features noted above as lacking in the combined teachings of May and Cheline, with respect to claim 6. Accordingly, the rejection of claim 10 is deemed to be in error for the same reasons as the rejection of claim 6.

Second, the Examiner's basis of obviousness appears to rely on supposition. Such supposition being that the proposed combination of May and Cheline is not efficient, and that the efficiency would be increased by including the DHCPDISCOVER and DHCPOFFER messages taught Merrill.

Deficiencies in the factual basis cannot be supplied by resorting to speculation or

unsupported generalities. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967) and *In re Freed*, 425 F.2d 785, 165 USPQ 570 (CCPA 1970). Rejections under §103 are to be based on fact, not supposition.

The Examiner has not offered any factual showing that the proposed combination of May and Cheline would not be as efficient as it could be by including the teaching of Merrill. In fact, there is no way that such efficiency can be proven since no apparatus exist combining the teaching of May and Cheline.

Note that the combination of May and Cheline does not result in a PC having a DHCP client. In May, the DHCP 524 of the xDSL modem acts as the DHCP client (paragraph [0054]).

Note also that May discloses that PPP 502 in computer 100 sends an IPCP Configure-Request 620 to PPP 502 in high-speed modem 110. The IPCP Configure_Request 620 requests that the peer issues an IP address for computer 100. This request is translated into a DHCP request for an IP address. There has been no showing that such a request by PPP 502 is any less efficient than Merrill's DHCP request.

Accordingly, the rejection of claim 10 is deemed to be in error and should be withdrawn.

Claims 11 and 13 were rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May and Cheline et al. in view of Okano et al. (USPA 2002/0062485). The Applicant respectfully traverses this rejection for the following reason(s).

Okano fails to teach the features noted above as lacking in the combined teachings of May

and Cheline, with respect to claims 6 and 12. Accordingly, the rejection of claims 11 and 13 is deemed to be in error for the same reasons as the rejection of claims 6 and 12.

Claims 14 was rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May and Cheline et al. in view of Mwikalo et al. (US 6,480,508). The Applicant respectfully traverses this rejection for the following reason(s).

Mwikalo fails to teach the features noted above as lacking in the combined teachings of May and Cheline, with respect to claim 6. Accordingly, the rejection of claims 14 is deemed to be in error for the same reasons as the rejection of claim 6.

Claims 1, 3 and 7 were rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May and Cheline et al. in view of Blair et al. (US 6,778,528). The Applicant respectfully traverses this rejection for the following reason(s).

Blair fails to teach the features noted above as lacking in the combined teachings of May and Cheline, with respect to claim 6. Claim 1 has similar features to those of claim 6, *i.e.*:

- *forming a single network between a client personal computer (PC) and a network access server (NAS) by allowing the ADSL modem to make a PPP connection to the NAS when the client PC is booted*; and

- *allowing the NAS to transmit Internet protocol (IP) configuration information, including a global IP address, to a DHCP server of the ADSL modem*

As discussed with respect to claim 6, the combination of May and Cheline fails to teach the

foregoing features.

Blair was not applied with respect to the foregoing features.

Accordingly, the rejection of claims 1, 3 and 7 is deemed to be in error for the same reasons as the rejection of claim 6.

Claim 2 was rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May, Cheline et al. and Blair et al. in view of Pagani et al. The Applicant respectfully traverses this rejection for the following reason(s).

See the traversal of the rejection of claim 8. The rejection of claim 2 is deemed to be in error for the same reasons as the rejections of claims 1 and 8.

Claim 4 was rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May, Cheline et al. and Blair et al. in view of Merrill et al. The Applicant respectfully traverses this rejection for the following reason(s).

See the traversal of the rejection of claim 10. The rejection of claim 2 is deemed to be in error for the same reasons as the rejections of claims 1 and 10.
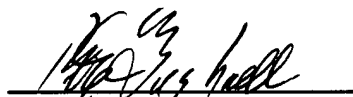
Claim 5 was rejected under 35 U.S.C. §103(a), as rendered obvious and unpatentable, over May, Cheline et al. and Blair et al. in view of Okano et al. The Applicant respectfully traverses this rejection for the following reason(s).

Okano fails to teach the features noted above as lacking in the combined teachings of May, Cheline and Blair, with respect to claim 1. Accordingly, the rejection of claim 5 is deemed to be in error for the same reasons as the rejection of claim 1.

The examiner is respectfully requested to reconsider the application, withdraw the objections and/or rejections and pass the application to issue in view of the above amendments and/or remarks.

Should a Petition for extension of time be required with the filing of this Amendment, the Commissioner is kindly requested to treat this paragraph as such a request and is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of the incurred fee if, **and only if**, a petition for extension of time be required **and** a check of the requisite amount is not enclosed.

Respectfully submitted,

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